

APPLICATION FOR NEW COURSE

1. Submitted by College of Agriculture Date 09/21/2007
Department/Division offering course Department of Animal and Food Sciences

2. Proposed designation and Bulletin description of this course

a. Prefix and Number FSC 642 b. Title* Food Pigments

*NOTE: If the title is longer than 24 characters (including spaces), write
A sensible title (not exceeding 24 characters) for use on transcripts _____

c. Lecture/Discussion hours per week 3 d. Laboratory hours per week 0

e. Studio hours per week 0 f. Credits 3

g. Course description

The course deals with fundamental basis of chemistry and biochemistry of food color.

h. Prerequisites (if any)

FSC 434G, Food Chemistry

i. May be repeated to a maximum of _____ (if applicable)

4. To be cross-listed as

Prefix and Number

Signature, Chairman, cross-listing department

5. Effective Date Fall 2009 (semester and year)

6. Course to be offered Fall Spring Summer

7. Will the course be offered each year? Yes No
(Explain if not annually)

Semi-annual. The course will be offered in odd years.

8. Why is this course needed?

Food color is an important quality attribute that influences consumers' purchase decision. Research and Development
in food industry are looking into strategies to improve and stabilize consumer-preferred color of food products.

9. a. By whom will the course be taught? Dr. Surendranath P. Suman

b. Are facilities for teaching the course now available? Yes No
If not, what plans have been made for providing them?

APPLICATION FOR NEW COURSE

10. What enrollment may be reasonably anticipated? 10 Students on a semi-annual basis

11. Will this course serve students in the Department primarily? Yes No

Will it be of service to a significant number of students outside the Department? Yes No
If so, explain.

Several graduate students in Animal Science and Nutritional Science will take this course.

Will the course serve as a University Studies Program course? Yes No

If yes, under what Area? _____

12. Check the category most applicable to this course
- traditional; offered in corresponding departments elsewhere;
 - relatively new, now being widely established
 - not yet to be found in many (or any) other universities

13. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky? Yes No

14. Is this course part of a proposed new program: Yes No
If yes, which?

15. Will adding this course change the degree requirements in one or more programs? Yes No
If yes, explain the change(s) below (NOTE – If “yes,” a program change form must also be submitted.)

16. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

18. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales. Check here if 400G-500.

19. Within the Department, who should be contacted for further information about the proposed course?

Name Dr. Surendranath P. Suman Phone Extension 7-3248

APPLICATION FOR NEW COURSE

Signatures of Approval:

09-21-07

Date of Approval by Department Faculty

3/18/2008

Date of Approval by College Faculty

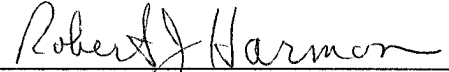
*Date of Approval by Undergraduate Council

*Date of Approval by Graduate Council

*Date of Approval by Health Care Colleges Council (HCCC)

*Date of Approval by Senate Council

*Date of Approval by University Senate



Reported by Department Chair

Reported by College Dean

Reported by Undergraduate Council Chair

Reported by Graduate Council Chair

Reported by HCCC Chair

Reported by Senate Council Office

Reported by Senate Council Office

*If applicable, as provided by the Rules of the University Senate

FSC 642: FOOD PIGMENTS
University of Kentucky
Department of Animal and Food Sciences
Fall 2009

Meeting Time: Lecture: TR 10:00 – 11:15 AM

Instructor: Dr. Surendranath Suman
405 W.P. Garrigus Building
Phone: 859-257-3248
Email: spsuma2@email.uky.edu

Office Hours: Open

COURSE DESCRIPTION:

FSC 642, Food Pigments
3 Credits (Lecture: 3 hours)

The proposed course will be taught odd years in the fall semester, and first taught in fall 2009. The course deals with the chemistry and biochemistry of color of different food products, which influence consumers' purchase decision. The lecture topics include fundamental basis of food color and food pigments, manipulating food color, influence of processing on food color, and regulatory aspects of food pigments.

Course Objectives:

Following successful completion of the course:

- Students will be able to differentiate various food pigments and appropriately choose them for application in food industry, based on the sound foundation established in the course on the chemistry and biochemistry of the compounds responsible for food color.
- Students will be able to clearly describe to consumers, industry and regulatory agencies the principles and applications of food color, upon which food products are often selected at the point of sale.
- Students will be able apply the techniques for evaluating food color, in global food industry and research.

Expectations:

1. To learn how to collect scientific literature using different gateways such as Pubmed, Science Index, electronic databases, and internet resources.
2. To gain an insight on the grant funding mechanism in a competitive funding program.

Text: There is no required text book. The lecture materials will be provided from a variety of resources such as text books, research articles, and review papers.

Grading System:

Exam # 1	25%
Exam # 2	25%
Final Exam	25%
Grant Project	25%

Exams: Exams will cover course materials discussed in the class and handouts. Exam questions may consist of multiple choices, matching the appropriate, true or false, short answer, and essay. The exams, including final exam, will not be cumulative.

Grant Project: The project will require each student to focus on developing a fundable research proposal following the guidelines for the USDA NRI Seed Grant Competition, with an objective to go beyond the traditional scientific review article. The main purpose is to learn how to develop novel research ideas, transform them to workable experiments with probability of success, and seek funding from appropriate agencies. The project narrative section should not exceed a total of 7 pages (single- or double-spaced), including figures and tables. The budget should be limited to a total of \$100,000 (including indirect costs) for 2 years.

Preparing a fundable research grant is a time-consuming work. Within the first three weeks of the class, students will conduct wide literature search to identify a specific research topic in the general area of food pigments. This specific area should be approved by the instructor. You will have to determine what additional investigations need to be carried out to better understand the given area, and propose logical experiments to achieve this goal. The grants will be written for the program 71.1 Improving Food Quality and Value, of USDA NRI CGP.

The research proposal will contain project summary, project description (including introduction and background, rationale and significance, research methodology, potential pitfalls), references, available facilities, vitae of the investigator, and budget. The proposal will be submitted for peer review by the instructor and your classmates. The class will be divided into two groups of review panels, and will evaluate the grants submitted by the other half. This activity will occur with the help and in the presence of the instructor. Following the panel, students will receive the feedback and will be provided the opportunity to make modifications before re-submitting the grant for the final grade. After resubmission each student has to orally defend the grant in front of the review panel.

The major limitations for the grant proposals are:

1. The area should not be a direct extension of your thesis research.
2. The area should be related to food pigments/food color.
3. Late grants are never considered for funding. The due dates of the grant and oral defense are final. If you miss the deadline you lose all the points for the grant project.

Grade	Percent
A	90-100
B	80-89
C	70-79

D grade is not awarded to graduate students. Any score below 70% will be considered as E grade.

FSC 642: FOOD PIGMENTS - PROPOSED SYLLABUS

<u>Week #</u>	<u>Lecture</u>
1	Introduction to food color
2	Color measurements – Techniques Color measurements – Instruments
3	Meat color - Overview Meat color – Pigments
4	Meat color – Recent developments Premature browning in ground beef
5	Bone color and discoloration Exam # 1
6	Seafood color Tasteless Smoke treatment of seafood
7	Salmon color Manipulating muscle food color: Packaging
8	Manipulating muscle food color: Antioxidants Egg color, Manipulating egg color with nutrients
9	Dairy product color Caramel and Beverage color
10	Lycopene and Tomato products Exam # 2
11	Fruit and Vegetable Color, and Polyphenols Anthocyanins, Strawberry and Cranberry color
12	Spices and Food Color Grant Review Panel Meeting
13	Vitamins and Food Color Natural and Exotic color pigments
14	Color of Red wine, Beer and alcoholic beverages NO CLASS - Thanksgiving Holiday
15	Food Color regulations Review Class
16	Grant - Oral Defense Grant - Oral Defense
17	Final Exam

Animal & Food Sciences Faculty Meeting
September 21, 2007
1:30 p.m.

Those in attendance: Robert Harmon (presiding), Debra Aaron, Darrh Bullock, Fernanda Camargo, Robert Coleman, Gary Cromwell, Lee Edgerton, Don Ely, George Heersche, Bernie Hennig, James Jackson, Laurie Lawrence, Merlin Lindemann, Jack McAllister, Joe O'Leary, Tony Pescatore, Gregg Rentfrow, Mary Rossano, Bill Silvia, Herb Strobel, Surendranath Suman, Youling Xiong, Cindy Stidham

Those not in attendance: Donna Amaral-Phillips, Les Anderson, Luke Boatright, James Boling, Roy Burris, Austin Cantor, Richard Coffey, Bill Crist, David Harmon, Clair Hicks, John Johns, Jamie Matthews, Kyle McLeod, Melissa Newman, Keith Schillo, Fred Thrift, Eric Vanzant

Opening

Dr. Harmon welcomed Dr. Fernanda Camargo to the faculty of Animal & Food Sciences.

The meeting opened with general business items. If your grant expires and you have personnel paid on it, the employees will no longer get paid. This is not like the old system where payroll continues; if there is an end date on an account in which an employee is paid, their pay will stop with that date. Please pay close attention to your grant expiration dates and contact Cindy with a new account to change the employees over to or the status of the account extension. This also applies to your graduate students; when you have new students coming in, when your students leave or when you need to make payroll account changes, be sure to notify Cindy – it can be as simple as an email. Robin handles the contracts, but Cindy handles the payroll and needs to be informed so people will get paid properly. Again, pay close attention to the details. Also, when staff or students leave, make sure to collect any keys from them, or send them to Cindy to turn in their keys. We are losing keys and need to keep track to avoid having to pay for more.

Reminder, all classes in which animals are used must have an IACUC protocol. Dr. Cox had asked Dr. Harmon for the protocols and Dr. Harmon discovered that some were missing. We need to be in compliance. There should be blanket protocol for every animal unit; every animal that exists at the University must have one.

Special plea – Dr. Harmon had asked that faculty email their class syllabi to Kevin for posting on the web. This is for informational purposes so students and potential students can see what our classes are about. If you have not already done so, please get this to Kevin as soon as possible.

Check out our website and see what others have already done:
<http://www.uky.edu/Ag/AnimalSciences/onlinesupcourses.html>

State year-end final report. Note, we have three state accounts: Instruction, Research, Extension.

FY '07 Final

State Funds + \$8,000

Income Account + \$112,204
 Meats Lab + \$70,500
 Animal Inventory + \$102,500

We are \$8,000 to the good! Sheila has worked hard and is to be commended. The animal inventory shows about \$102,500 on paper; though these are not usable dollars. The Income account balance is decreased from last year, so we actually spent more this past fiscal year. We get to carry over the income as long as our state funds are in the black. The reality though is that the \$112,204 are College funds that we have carried for several years and our figure is zero. Those dollars will probably go to fund the feed mill. The meat lab had carry-over from last year and is up; partially due to the course fees. We bring in about \$10,000 - \$12,000 from our \$25/\$50 course fees. This has boosted our ability to do more and will help with our class travel expenses. The travel now exceeds \$10,000 (is closer to \$14,000) per year and we are adding classes. We need to continue to be diligent as prices are going up!

Enrollment – there are errors in the system so these figures are unofficial.

Fall '07 (unofficial)

ASC 255 total	FSC 21 total
182 female (71%)	11 female (52%)
81 freshman (67% female)	3 freshman

EQSM (Equine Science & Management)	Intro class
36 total	46 total
34 female (94%)	43 female (94%)

ASC had 100 freshmen last fall and 298 total students – it seems the difference is due to EQSM. It is noted that the FSC freshman figure is low, there are usually about 8 per Dr. Xiong. Food Science usually gets transfers and they are not figured in to these numbers. The majority in Equine are freshmen with about 5 transfers; the classes are not all in place so transfers are not encouraged at this time.

Curriculum Committee – Dr. Silvia reported on the curriculum committee and there are some items that need faculty action. Dr. Suman is proposing two new courses, ASC 430 Sensory Evaluation of Foods and 642 Food Pigments. The food science group has met and supports these classes, with a few changes. The curriculum committee agrees and is ready for faculty approval to move them on through the process. Dr. Suman gave a brief description of each: FSC 430 Sensory evaluation of foods, 3 credits (2 lectures + 1 lab) will be taught even years in the fall semester, and first taught in fall 2010. This course deals with the sensory evaluation methods used for food products. The topics include techniques for measuring sensory attributes, and how sensory evaluation program is utilized in the food industry. FSC 642 Food pigments, 3 credits (2 lectures) will be taught odd years in the fall semester, and first taught in fall 2009. The course deals with the chemistry and biochemistry of color of different food products, which influence consumers' purchase decision. The lecture topics include fundamental basis of food color and food pigments, manipulating food color, influence of processing on food color, and regulatory

aspects of food pigments. The faculty voted and they passed unanimously with no further discussion.

The second item from the curriculum committee is the cross listing for ASC 680 with Nutritional Sciences. Dr. David Harmon said he is not getting students from Nutritional Sciences and feels the cross listing is unnecessary. It was asked if Nutritional Sciences had been informed about this and it was decided Dr. David Harmon make sure to notify them of this change before we take action. That being the case, to expedite the process the faculty voted (with no opposition) and it passed unanimously with the contingency of the pending notification to Nutritional Sciences.

Dr. Silvia also reported that the course evaluation process by the curriculum committee is underway with committee members meeting with faculty to discuss their courses. This process should be complete and the committee having something to report by the Faculty Retreat.

An email has gone out regarding the reorganization of Dr. Mullen's office (N-6). They have added a new position and promoted Jamie Dunn, she will be working with Susan Skees in advising students. The Provost has asked about student retention and a proposal is being put together by Dr. Mullen's office to submit.

Dr. Harmon unofficially welcomed Dr. Jackson back. Dr. Jackson has been in the office a few times lately and has his doctor's blessing to return to work. We are looking at the 9th floor restroom to become unisex and wheel chair/handicap accessible. We may also consider looking mid-way down the building at the 4th floor restroom for changes as well.

Dr. Bullock gave a brief update on the Beef Extension position. This is at the Assistant Professor level and 100% Extension, to replace Dr. John Johns. The position closed on September 1 and there are 5 very qualified applicants. The committee is to meet soon to start the interview process. The position is available on January 1, but we need to have it filled no later than April 2008.

The remaining Equine teaching/research position may be reopened the first of the year. We have recently received a resume of someone who looks qualified and we need to check on the process, if they can be considered as part of the last posting or how to handle this as we may want to pursue this candidate.

Animal Welfare and Behavior Symposium is scheduled for October 1-2, 2007. We have three speakers coming and it is critical that faculty be present – and bring your graduate students! This has been advertised to several other University departments (LDDC, DLAR, etc.) and some industry people; there seems to be a lot of interest in this. The faculty need to support this as this is one area that was noted as important at the last faculty retreat. The Kernel called and Dr. Harmon did a phone interview – not sure when it is to hit the paper, but it is assumed it will come out before the Symposium, with a possible follow-up article. Dr. Harmon noted we could have some Animal Rightists and even PETA people show up. It was suggested that we have an open session for the faculty to meet with the speakers on Monday morning, but if we set it up, we need you to show up. This is a good opportunity for the faculty to interact with the speakers

and learn from them; please take full advantage and attend the various meetings. Dr. Harmon noted that if we want this type of position in our department, we need to know what they do. Dr. Strobel is to set a time for DLAR to meet with the speakers and will get back with the faculty on a time for our open session. There is also a reception at 5:00 p.m. on Monday the 1st; there will be food and Dr. Harmon asks faculty to make it a point to come out and visit with the speakers and others as the reception is open to anyone.

The Animal Science Reunion is scheduled for Friday, September 28 at 5:45 p.m.; you need to get your ticket from Lori on the 2nd floor, cost is \$10. The ticket price not only includes the meal, but a portion of the funds go to the scholarship fund. Dr. Harmon would like to see faculty support this event as it is pretty important. He thanks you in advance for your support!

Dr. Cox will be presenting at the next Seminar scheduled for 2:00 p.m. on Monday, September 24. This is a good opportunity to interact with Dr. Cox. She will also be going over changes happening in her area and the future of hatch funding and how it impacts the College. Hatch funds may become competitive funding. Most of our faculty are now paid on State Funds, with a few exceptions. Most of our staff are now on Federal funds and we need to come up with raise dollars for these positions – about \$32,000.

Drs. Strobel and Boatright are up for promotion to Full Professor. We will need letters of support from all full professors. The request for letters for Dr. Strobel has gone out and letters are due no later than October 12. We are still collecting outside letters for Dr. Boatright and it is anticipated that faculty letters will be due about October 19.

Dr. Harmon is proposing that the Faculty Retreat be moved up to December rather than January, at the request of some faculty. Dr. Harmon doesn't want it to be on a Monday and asked the faculty present if they had any objections to the proposed date of December 18; there were none so, the date is Tuesday, December 18, 2007, this is the week after finals – mark your calendars! There will be an agenda sent out, but Dr. Harmon went over a few items that he would like to cover. 1. Dr. Edgerton has talked with Dr. Harmon and plans to retire in 2009 so an agenda item would be how to fulfill this advising and teaching. We need a firm policy on advising assignments as it is not appropriate for one person to advise 100+ students. Should we consider lecturer or instructorship positions? The advantage of these positions being they are not on promotion/tenure track so they can be fully devoted to the job. Though, we would have to give up a faculty line to do it. 2. Assessment is fast approaching mandatory; we need to get on board, and are currently on the right track with doing so. 3. The graduate student funding proposal needs to be finalized. Remember, the department has no funds and the College has nothing to give us, so we need to be looking at new, outside funding. 4. Faculty thoughts on Animal Welfare and Behavior and what we should do. Dr. Harmon will send out notification in November about the Retreat.

The Hall of Fame display is full and there is no space for an additional case. Dr. Harmon has talked with a company who will scan in the photos and make them 6x8 plaques – they are working on getting us a sample. It was suggested a sentence be added as to why they are in the Hall of Fame. Another suggestion is to take their bios and create a booklet that can be added to each year with their information and then put a sign up in the display case as to where the

booklet is kept if anyone is interested at looking up their information. Both are good ideas, though the space issue prevents us from putting the sentence in the display case along with their photo. It is important that we do have a file with all the information for records/history sake.

Announcements:

- Faculty Meetings: TBD (NOTE: meetings will be Friday afternoons for Fall 07 semester)
- Faculty Retreat: Tuesday, December 18 (mark your calendars!)

Adjournment 2:35 p.m.



[CoA Graduate Curriculum Committee](#) > [FSC 642](#)

FSC 642

Respond to this Survey	Actions ▼	Settings ▼	View: All Responses
View Response	Created By	Modified	Completed
View Response #1	Harmon, David L	11/30/2007 2:28 PM	Yes
View Response #2	Dougherty, C. T	12/3/2007 9:48 AM	Yes
View Response #3	Wagner, David	12/3/2007 10:58 AM	Yes
View Response #4	Coyne, Mark S	12/4/2007 10:37 AM	Yes
View Response #5	Hunt, Arthur G	12/11/2007 12:24 PM	Yes
View Response #6	Gaetke, Lisa M	12/12/2007 11:27 AM	Yes
View Response #7	Weckman, Randy D	12/12/2007 2:41 PM	Yes

[College Curriculum Approval](#) > [FSC 642 Food Pigments](#)

FSC 642 Food Pigments

 Respond to this Survey	Actions ▼	Settings ▼	View: All Responses
View Response	Created By	Modified	Completed
View Response #1	Robbins, Lynn W	3/9/2008 10:11 AM	Yes
View Response #2	Wagner, David	3/9/2008 10:20 AM	Yes
View Response #3	Yeagan, Ken	3/10/2008 11:28 AM	Yes
View Response #4	Vaillancourt, Lisa J	3/10/2008 6:02 PM	Yes
View Response #5	Williams, Mark A	3/12/2008 1:57 PM	Yes
View Response #6	Dougherty, C. T	3/18/2008 2:21 PM	Yes



UNIVERSITY OF KENTUCKY

Dream • Challenge • Succeed

COLLEGE OF AGRICULTURE

March 24, 2008

MEMO

To: Dr. Jeannine Blackwell
Dean, Graduate School

From: Dr. Mike Mullen
Associate Dean

Re: New Course Proposal from Food Science



Attached is a proposal for a new course, FSC 542 – Food Pigments. This was approved by the Graduate Committee on December 12. Approval by College faculty occurred on March 18, 2008.

The College of Agriculture looks forward to the approval of this course change.




UNIVERSITY OF KENTUCKY

College of Agriculture
Animal Sciences
907 W.P. Garrigus Building
Lexington, KY 40546-0215
(859) 257-2686
Fax: (859) 257-2534
www.uky.edu

MEMORANDUM

TO: Mike Mullen
Associate Dean for Academic Programs

FROM: Bob Harmon
Chair, Animal and Food Sciences 

DATE: September 28, 2007

RE: Proposal for Two New Food Science Courses

The Department of Animal and Food Sciences is proposing the establishment of two new Food Science courses:

- FSC 430 Sensory Evaluation of Foods
- FSC 642 Food Pigments

Both courses will be taught by Dr. Surendranath Suman and will contribute needed subject mater to the Food Science curriculum. The courses have been reviewed by the Food Science faculty and approved by the departmental Curriculum Committee. The faculty approved the courses by vote on September 21, 2007. I have attached the application forms, course syllabi and the minutes of the faculty meeting at which the courses were approved.

Please contact me if any further information is needed.

Attachments

UNIVERSITY SENATE ROUTING LOG

Proposal Title: New Course - FSC 642 Food Pigments

Name/email/phone for proposal contact: Surendranath Suman; s.suman@uky.edu; 7-3248

Instruction: To facilitate the processing of this proposal please identify the groups or individuals reviewing the proposal, identify a contact person for each entry, provide the consequences of the review (specifically, approval, rejection, no decision and vote outcome, if any) and please attach a copy of any report or memorandum developed with comments on this proposal.

Reviewed by: (Chairs, Directors, Faculty Groups, Faculty Councils, Committees, etc)	Contact person Name (phone/email)	Consequences of Review:	Date of Proposal Review	Review Summary Attached? (yes or no)
Curriculum Committee & AFS faculty vote	Robert J. Harmon	approval	09-21-07	Yes
College of Ag Grad Curr Comm.	Michael Mullen 7-3469/mmullen@uky.edu	Approved	12/12/07	Yes
College of Ag Faculty	Michael Mullen	Approved	3/18/08	Yes